

2 ~~26~~. The method of Claim ~~25~~¹ wherein the first support is retrievable.

3 ~~27~~. The method of Claim ~~28~~¹ wherein the first support includes a probe which binds with the target polynucleotide.

4 ~~28~~. The method of Claim ~~28~~¹ wherein the target polynucleotide is amplified with a polymerase.

5 ~~29~~. The method of Claim ~~28~~⁴ wherein the polymerase is a DNA polymerase, an RNA polymerase, a transcriptase or Q β replicase.

6 ~~30~~. The method of Claim ~~28~~⁴ wherein the target polynucleotide is a DNA polynucleotide and the polymerase is a DNA polymerase.

7 ~~31~~. A method for detecting a target polynucleotide contained in a sample comprising the steps of:

- (a) contacting the sample with a first support which binds to the target polynucleotide;
- (b) substantially separating the first support and bound target polynucleotide from the sample;
- (c) amplifying the target polynucleotide; and
- (d) detecting the presence of the amplified target polynucleotide.

8 ~~32~~. The method of Claim ~~31~~⁷ wherein the first support is retrievable.

9 ~~33~~. The method of Claim ~~31~~⁸ wherein the first support includes a probe which binds with the target polynucleotide.

10 ~~34~~. The method of Claim ~~31~~⁷ wherein the target polynucleotide is amplified with a polymerase.

11 ¹⁰ 35. The method of Claim ~~34~~ wherein the polymerase is a DNA polymerase, an RNA polymerase, a transcriptase or Q β replicase.

12 ¹¹ 36. The method of Claim ~~35~~ wherein the target polynucleotide is a DNA polynucleotide and the polymerase is a DNA polymerase.

13 ⁷ 37. The method of Claim ~~31~~ wherein the amplified target polynucleotide is contacted with a label.

14 ⁷ 38. The method of Claim ~~31~~ wherein the amplified target polynucleotide is contacted with a labeled probe.

15 ⁷ 39. The method of Claim ~~31~~ wherein the amplified target polynucleotide is contacted with a second support which binds to the amplified target polynucleotide.

16 ¹⁵ 40. The method of Claim ~~39~~ wherein the amplified target polynucleotide is contacted with a labeled probe.

17 ¹⁴ 41. The method of Claim ~~40~~ wherein the target polynucleotide is amplified with a polymerase.

18 ¹⁷ 42. The method of Claim ~~41~~ wherein the target polynucleotide is a DNA polynucleotide and the polymerase is a DNA polymerase.

19 ¹⁷ 43. A method for detecting a target polynucleotide contained in a sample comprising the steps of:

- (a) contacting the sample with a first support which binds to the target polynucleotide;
- (b) substantially separating the first support and bound target polynucleotide from the sample;
- (c) amplifying the sample with a DNA polymerase;

(d) contacting the amplified target polynucleotide with a second support which binds to the amplified target polynucleotide and a labeled probe which binds to the target polynucleotide; and

(e) detecting the presence of the amplified target polynucleotide.

44. A kit for detecting a target polynucleotide contained in a sample comprising:

(a) means for substantially separating the target polynucleotide from the sample;

(b) means for amplifying the target polynucleotide;

(c) means for binding the amplified target polynucleotide to a solid medium; and

(d) means for labeling the amplified target polynucleotide.

45. The kit of Claim 44 wherein:

(a) the means for substantially separating the target polynucleotide from the sample include a first support;

(b) the means for amplifying the target polynucleotide include a polymerase;

(c) the means for binding the amplified target polynucleotide to a solid medium include a second support which binds to the amplified target polynucleotide; and

(d) a detector probe for labeling the amplified target polynucleotide.

22 46. The kit of Claim 45 further comprising a capture probe which binds to the first support and to the target.

22 47. The kit of Claim 46 wherein the polymerase is a DNA polymerase and the detector probe is labeled.

24 48. A kit for amplifying a target polynucleotide contained in a sample comprising:

(a) means for substantially separating the target polynucleotide from the sample and

(b) means for amplifying the target polynucleotide.

2549. The kit of Claim ²⁴48 wherein:

- (a) the means for substantially separating the target polynucleotide from the sample includes a support which binds to the target polynucleotide and
- (b) the means for amplifying the target polynucleotide includes a polymerase.

²⁴50. The kit of Claim ²⁵49 wherein:

- (a) the polymerase is a DNA polymerase; and
- (b) the means for substantially separating the target polynucleotide from the sample includes a probe which binds to the target polynucleotide and the support.

REMARKS

I. Status Of The Application

A. The Application Is A Divisional Of U.S. Serial No. 08/400,657.

The subject application (Serial No. 08/283,080) was filed as an original application. However, as discussed herein, the application is entitled to the benefit of consideration as a divisional application to copending application U.S. Serial No. 08/400,657 filed March 8, 1995. U.S. Serial No. 08/400,657 is itself a continuation application to U.S. Serial No. 08/257,469, filed June 8, 1994 and now abandoned. U.S. Serial No. 08/257,469 is a continuation application to U.S. Serial No. 08/124,826 filed September 21, 1993 and now abandoned. Thus, U.S. Serial No. 08/400,657 claims priority from U.S. Serial No. 08/124,826 filed September 21, 1993.

Applicants are permitted to cross-reference the subject application with and claim the benefit of the earlier priority date of Serial No. 08/400,657 and U.S. Serial No. 08/124,826 pursuant to 37 CFR §1.78. Specifically, 37 CFR §1.78(a)(1) provides that a nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications. In order for this to be proper, each prior filed copending application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 USC §112. In addition, each prior application must be: